Application No. 10/591,718 Amendment and Response dated April 27, 2012

Reply to Office Action mailed on October 28, 2011

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Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

 (Currently amended) A positive-type resist composition for liquid immersion lithography comprising:

a resin component (A), increasing alkali-solubility by acid action; and an acid generator component (B), generating acid by exposure,

a nitrogen-containing organic compound represented by the following general formula (21):

wherein, R¹³ and R¹⁴ each independently represent a lower alkylene group having 1 to 5 carbon atoms, and R¹⁵ represents a lower alkyl group having 1 to 5 carbon atoms;

wherein the resin component (A) contains at least one acrylic ester constitutional unit (a1), at least one methacrylic ester constitutional unit (a2) having acid dissociable, dissolution inhibiting group, and at least one constitutional unit (a4) induced from a (meth)acrylic ester having a monocyclic or a polycyclic group containing lactone, one or more constitutional units (a3), which are different from the constitutional units (a1) and (a2).

the constitutional unit (a1) consisting of a cyclic group bonded to an acrylic ester of the constitutional unit (a1), and a fluoro organic group bonded to the cyclic group, and the fluoro organic group being formed by at least partially substituting hydrogen atoms of an organic group with fluorine atoms, and having one unsubstituted alcoholic hydroxyl group is expressed by the following general formula (1).

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in which, X represents a divalent or trivalent aliphatic cyclic group; and Y represents a divalent alkylene or alkyloxy group having 1 to 6 carbons; R^2 represents a hydrogen atom, a chain, a branched or a cyclic alkyloxymethyl group having 1 to 15 carbons; 1 and m respectively, are integers from 1 to 5; and n is an integer of 1 or 2,

the constitutional unit (a3) is expressed by the following general formula (3).

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in which, Z represents a trivalent cyclic group; R[‡] represents a hydrogen atom or a methyl group; R[‡] represents a hydrogen atom, a chain, a branched or a cyclic alkyloxymethyl group having 1 to 15 carbons; h and i respectively, are integers from 1 to 5; and i is 2, and

in the resin component (A), the constitutional unit induced from methacrylic ester is 20 to 80 mol %, and the constitutional unit induced from aerylic ester is 80 to 20 mol % relative to the total amount of these constitutional units.

2-6. (Cancelled)

 (Previously presented) The positive-type resist composition for liquid immersion lithography according to Claim 1, wherein a cyclic group in the constitutional unit (a1) is an aliphatic cyclic group. Application No. 10/591,718 Amendment and Response dated April 27, 2012

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- (Original) The resist composition for liquid immersion lithography according to Claim 7, wherein the alicyclic group is a polycyclic aliphatic hydrocarbon group.
- (Previously presented) The resist composition for liquid immersion lithography according to Claim 8, wherein the polycyclic aliphatic hydrocarbon group is a norbornyl group.

10-12. (Cancelled)

13. (Previously presented) A method for forming a resist pattern using a liquid immersion lithography process comprising the steps of:

forming a photoresist film onto a substrate by using at least the positive-type resist composition according to Claim 1;

disposing an immersion solvent onto the substrate on which the resist film is laminated; selectively exposing the resist film via the immersion fluid; conducting a heat process as required; and

developing the resist film.

14-24. (Cancelled)

25. (New) The positive-type resist composition for liquid immersion lithography according to Claim 1, wherein the constitutional unit (a1) is expressed by the following general formula (1).

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in which, X represents a divalent cyclic group; and Y represents a divalent alkylene or alkyloxy group having 1 to 6 carbons; R² represents a hydrogen atom; I and m respectively, are integers from 1 to 5; and n is 1.

26. (New) The positive-type resist composition for liquid immersion lithography according to Claim 1, wherein the constitutional unit (a2) is expressed by the following general formula (2),

in which, R^1 represents a hydrogen atom or a methyl group; R^3 to R^5 represents an alkyl group having 1 to 10 carbons, which may be the same or different from each other; and at least two alkyl groups among these may bind to form the cyclic groups.